

**USES, CHALLENGES, AND PROSPECTS OF NEW MEDIA FOR
BLENDED LEARNING IN A NIGERIAN POLYTECHNIC:
EVIDENCE FROM FEDERAL POLYTECHNIC UGEP, CROSS
RIVER STATE**

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Abstract

The rapid expansion of digital communication technologies has increased the relevance of blended learning in tertiary education, particularly in contexts where conventional classroom instruction must coexist with online and mobile-mediated learning. This study examined the uses, challenges, and prospects of new media as a tool for blended learning at Federal Polytechnic Ugep, Cross River State, Nigeria. A -methods design was employed. Quantitative data were collected through a questionnaire administered to 248 respondents, while qualitative data were obtained through in-depth interviews with 50 academic staff who were active users of new media. Descriptive statistics, principally frequencies and percentages, were used to analyse the questionnaire data, while interview responses were analysed thematically. The findings indicate that respondents use new media for receiving lectures and lecture notes, accessing learning materials, obtaining academic information, and sharing academic experiences. WhatsApp and YouTube were the

most prominent platforms reported. Most respondents (81.5%) identified blended learning as a combination of face-to-face and online learning, and the same proportion reported that this was the principal format used in the institution. However, implementation is constrained by unreliable internet connectivity, limited access to devices and data, and irregular electricity supply. Respondents nevertheless identified flexibility, access to learning resources, improved engagement, and cost-effectiveness as important prospects. The study concludes that new media can support blended learning in Nigerian polytechnics when institutional infrastructure, staff capacity, student access, and instructional design are addressed together. The paper recommends institutional investment in connectivity and power, systematic staff development, and curriculum and instructional-design reforms that integrate digital and face-to-face teaching.

Keywords: new media; blended learning; tertiary education; technology acceptance; Nigerian polytechnic; digital learning

Introduction

The expansion of digital media has altered the ways in which information is produced, distributed, accessed, and discussed. In tertiary education, this transformation has created opportunities to supplement conventional classroom teaching with online, mobile, and social-media-mediated learning. Blended learning is particularly relevant because it combines face-to-face instruction with online learning activities rather than treating digital learning as a complete replacement for classroom interaction. Garrison and Vaughan (2007) describe blended learning as an approach that integrates the strengths of face-to-face teaching with the opportunities afforded by online learning. Lalima and Dangwal (2017) similarly emphasise that blended learning combines traditional instruction with information and communication technologies to support flexible and collaborative learning.

The COVID-19 pandemic accelerated institutional interest in digital learning because prolonged disruption to physical teaching demonstrated the vulnerability of education systems that depend exclusively on classroom contact. In Nigeria, the pandemic also exposed persistent differences in connectivity, device ownership, electricity supply, digital competence, and institutional readiness. At the same time, the widespread use of mobile

phones and social networking applications created practical channels through which lecturers and students could exchange information, distribute learning materials, communicate about assignments, and sustain interaction beyond the physical classroom. New media in this study refers broadly to digitally mediated communication and learning platforms through which users can create, distribute, receive, and interact with information. Examples reported in the study materials include WhatsApp, YouTube, Google Docs, Screencast-O-Matic, TED-Ed, Khan Academy, and related platforms. These tools differ in purpose and sophistication, but they share the capacity to support asynchronous or synchronous communication, multimedia content, collaboration, and access to learning resources.

The value of new media for blended learning should, however, not be inferred merely from access to technology. Effective blended learning depends on the alignment of technology with pedagogy, curriculum, assessment, staff competence, student readiness, and institutional support. Technology Acceptance Model (TAM) provides a useful theoretical lens because it proposes that perceived usefulness and perceived ease of use influence users' acceptance and use of technology (Davis, 1989). In the context of Federal Polytechnic Ugep, this perspective helps explain why students and lecturers may adopt particular platforms when they perceive them as useful and manageable, while also recognising that structural barriers can limit actual use. Globally, blended learning has been recognized for its potential to increase access, flexibility, learner autonomy and improve learning outcomes (BonkGraham, 2012). In polytechnic education, where competency-based and practical skill acquisition are paramount, new media offers opportunities for simulation, virtual collaboration, asynchronous content delivery and enhanced student-teacher interaction (Vaughan, 2007).

In Nigeria, the discourse on integrating new media into teaching and learning has gained traction, particularly after the COVID-19 pandemic which exposed the fragility of the traditional face-to-face model (Adedoyin &

Soykan, 2020). Despite the acknowledged benefits, Nigerian polytechnics still lag behind in the effective deployment of new media for blended learning. Scholars has attributed this to infrastructural challenges such as poor internet connectivity, epileptic power supply, high cost of data, low digital literacy among lecturer and students, and lack of clear institutional policies on e-learning (Oye, Salleh & Lahad, 2011; Okoro& Nwafor, 2022; Eyo, 2023). Blended learning has been recognized for its potential to increase access, flexibility, learner autonomy and improve learning outcomes (Graham, 2006; Bonk & Graham, 2012). In polytechnic education, where competency-based and practical skill acquisition are paramount, new media offers opportunities for simulation, virtual collaboration, asynchronous content delivery and enhanced student-teacher interaction (Vaughan, 2007)

The polytechnic sector in Nigeria is statutorily mandated to produce middle-level technical manpower for national development (Federal Republic of Nigeria, 2013). To achieve this mandate in a digital economy, polytechnics must align with global best practices in technology-mediated instruction. Federal Polytechnic, Ugep, established in 2021 in Cross River State, is a nascent institution striving to build a 21st century compliant teaching and learning culture. However, anecdotal evidence suggests that the use of new media for blended learning in the institution is still informal, largely driven by individuals' initiatives using WhatsApp, Telegram, and Google Classroom, rather than an institutionally structured LMS. While several studies have examined and blended learning in Nigerian universities (Alhassan & Adamu, 2021; Onah & Nwosu, 2022), there is paucity of empirical evidence from the polytechnic sector, especially from newly established federal polytechnics in South-South Nigeria. This gap in literature necessitates a context-specific investigation.

It is this backdrop that this study seeks to examine the uses, challenges and prospects of new media for blended learning in a Nigerian polytechnic, with empirical evidence from Federal Polytechnic Ugep, Cross River State.

Statement of the Problem

Many tertiary students and lecturers have access to internet-enabled mobile devices and social media or messaging accounts. Such access creates a potential foundation for blended learning. Nevertheless, access alone does not establish that new media is being used systematically for teaching and learning, nor does it show whether the institutional environment is sufficiently supportive of sustained digital learning. Federal Polytechnic Ugep has experienced increasing use of digital communication for academic interaction. However, the study identifies an evidence gap concerning the extent and nature of this use in a relatively small-town Nigerian tertiary institution. It also identifies practical concerns about network quality, electricity, devices, data costs, and knowledge of blended-learning practices. These issues make it necessary to distinguish between simple access to new media and meaningful educational integration. It is against this background that this study seeks to investigate the uses, challenges and prospects of new media for blended learning in a Nigerian Polytechnic, with specific evidence from Federal Polytechnic Ugep, Cross River State, in order to provide evidence-based recommendations for policy and practice.

Objectives of the Study

1. To determine the level and format of blended-learning use at Federal Polytechnic Ugep.
2. To identify the major challenges associated with using new media for blended learning at Federal Polytechnic Ugep.
3. To examine the perceived prospects of new media for blended learning at Federal Polytechnic Ugep.

Research Questions

1. What is the level and format of blended-learning use at Federal Polytechnic Ugep?
2. What challenges are encountered in using new media for blended learning at Federal Polytechnic Ugep?

3. What are the perceived prospects of new media for blended learning at Federal Polytechnic Ugep?

Significance of the Study

The study is relevant to tertiary-education managers, lecturers, students, curriculum planners, policymakers, and researchers. For institutional managers, the findings identify infrastructure and capacity constraints that can inform investment decisions. For lecturers, the study highlights the importance of integrating digital platforms with instructional objectives rather than using them merely as informal communication channels. For students, effective blended learning can expand access to learning resources and academic interaction beyond scheduled classroom periods. For policymakers and regulatory bodies, the findings provide institution-level evidence that may support digital-learning capacity development in Nigerian polytechnics.

Scope of the Study

The study is limited to Federal Polytechnic Ugep, Cross River State, Nigeria. It focuses on students and academic staff and examines new-media use for blended learning, the challenges associated with that use, and its perceived prospects. The study does not attempt to compare Federal Polytechnic Ugep with other institutions or to measure learning outcomes experimentally.

Review of Related Literature

Conceptual Review

New Media

New media encompasses digitally mediated communication technologies that facilitate rapid distribution, interaction, multimedia communication, and user participation. They consist of the internet, mobile phones, social media such as blogs and micro-blogs (such as twitter and Sina weibo), social networking websites like Facebook, video sharing sites, educational settings, new media may include messaging applications, social

networking sites, video-sharing platforms such as Youtube and others (Nations, 2012). Some of the things that make new media different from traditional media (radio, television, newspapers and magazines) according to Nwabueze, Obasi and Obi (2012) include interactivity, digitality, hypertextuality, often audience –created and user-driven, function in real time, borderless, information often short-lived, more difficult to regulate and censor, not always adhering to Journalistic standards and ethics.

According to Adibe (2021), the rise of new media has increased communication between people all over the world and the internet. It has allowed people to express themselves through blogs, websites, videos, pictures and other user-generated media. Flew (2002, p.42) states that as a result of the evolution of new media technologies, globalisation occurs. Variations exist in the use of terms, describing the new technologies that revolutionized the processes of information gathering and dissemination. Terms such as “social media,” “new media” or “ICT” are used interchangeably to describe these new technologies in the communication industry. These terms are used to describe the digital and computerized communication technologies. In his words, Auwal, (2015) described new media as platforms with highly accessible digital technologies such as blogs, podcasts, social networks, wikis, micro-blogs and message boards that can be used by the general public for interactions across distance.

Nevertheless, new media are products of globalization and scientific innovations which stems from the expansion of information and communication technologies. The concept has been defined and explained in different ways by its users, ICT experts, and authors. Nwabueze (2009:146-147) rightly asserts that, it is still difficult to accurately state what comprises the new media. According to her, new media refers to products of the on-going information technology revolution which have separated the old communication technologies, basically those used prior to the advent of computer (land-line telephone, electronic news gathering camera, analogue

radio and television, video text, wireless intercom system etc) from the new communication technologies (computer, Direct Broadcast Satellite (DBS), digital radio and television systems, the Internet and World Wide Web, GSM phones, etc).

Today, the Internet and World Wide Web constitute major components of the new media. New media specifically refers to web facilitated communication channels which have redefined journalistic information sharing and dissemination with a more interactive sender-receiver relationship in a mass communication environment (Auwal, 2015). New media can be described as a group of Internet-based applications that build on the ideological and technological foundations of the World Wide Web (WWW) and that allows the creation and exchange of user-generated contents. Accordingly, Compaine (2002) cited in Idiong (2012:2) observes that, the technologies described as “new media” evolved from the miniaturisation and digitisation of communication gadgets that took place in the decades following the 1980s. As a result of these processes, the media became increasingly manipulable, networkable, compressible and interactive.

Asemah (2011:204-205) describes new media in the following terms, noting that, new media is a broad term that emerged in the later part of the twentieth century to encompass the amalgamation of traditional media such as film, images, music, spoken and written words, with the interactive power of computer and communications technology, computer-enabled consumer devices and most importantly, the Internet. New media holds a possibility of on-demand access to content anytime, anywhere, on any digital device, as well as, interactive user feedback, creative participation and community formation around the media content. According to him, new media are a disparate set of communication technologies that share certain features apart from being new, made possible by digitalization and being widely available for personal use as a communication device.

The new media are not only or even mainly concerned with the production and distribution of messages, but at least, mainly concerned with processing, exchange and storage. Hanson (2005) cited in Nwabueze (2009:147) notes that, these (new media) are often referred to as “dot-coms.” Most significant are the independent sites zines, weblogs, webcams, and gossip pages – that are operated by anyone who wants to be a publisher and has a website. The term new media is construed broadly to encompass all the digital, computerized, or networked information and communication technologies that have emerged since the later part of the twentieth century (Wikipedia, 2011 in Idiong, 2012:3). Idiong puts forth that, within this range of technologies are such innovations as the Internet, individual websites and blogs, computer games, mobile telephony, and even small or digital media such as computer discs with read-only memory (CD-ROMs), and digital versatile discs (DVDs). The author, however, argues that this definition of new media does not include television, films, magazines, books or any paper-based publications – unless they contain technologies that enable digital interactivity, which is one of the cardinal characteristics of new media. New media emerged as powerful communication and development tools, adding to the potency of mobile telecommunications as drivers of economic and democratic change. New media technologies have significant impacts on organizational, professional and individual reputations.

Blended Learning

Blended learning is a term used to describe a solution that combines several different delivery methods, such as collaboration software, web-based courses and knowledge management practices. Fitriani, Fatima, & Herman, (2021) and Sofino & Pradikto, (2022) defined Blended learning as a teaching approach that has gained popularity because it offers students a wider range of learning experiences –combining face to face teaching with online learning methods. This means students have the opportunity to engage

with course materials and activities both in the classroom and through digital platforms. Owston, York & Murtha (2013) in support of that view, pointed out that the term Blended Learning refers to the method of mixing and combining traditional learning activities by attending face to face lectures with online learning activities to attain enhanced and personalized student experience and outcomes in addition to improving the efficiency of the teaching practices.

Furthermore, BL emphasizes student-centered rather than teacher-centred approaches (AIAmri, Watson & Watson, 2021). By recognizing the strengths of both face to face and online learning activities, a variety of benefits can be achieved. For instance both Owston et al. (2013) and AIAmri et al. (2021) stated that BL would enable students to have control over pace, path, time and place, hence granting them the opportunity to customize their learning experience and meet their diverse needs flexibly. In addition, such a method would provide both learners and teachers with a variety of resources, means and mediums that they could utilize to enrich the educational process, including videos, podcasts, online materials and presentations. Moreover, the fact that some classes can be virtual would allow the lecturers to create the teaching material and record their sessions, and then by making them available online, they can be used several times by students in different classes (Alsalhi, Eltahir, Gharaibeh, Qusef, 2026).

Singh (2025) defined blended learning as the creation of an atmosphere with the help of ICT that will ensure learning continues out of the campus; it is logical, economical, and effective way of integrating traditional classroom experience with online learning experience. The high accessibility to courses and materials anytime from anywhere can also be added to the benefit of blended learning (Alsalhi, et al., 2026). In addition, blended learning facilitates the overall student assessment by providing the features of conducting comprehensive and efficient online exams and online discussions with a built-in and well defined rubric for automated grading and very detailed reports. This, in turn, is considered a huge relief for teachers when the

effort and time needed are reduced. Also it benefits the students as they can track their progress and get on-spot feedback.

On the other hand, the Blended Learning method entails some disadvantages (Alsalhi, et al., 2026). The huge dependency on technology is considered one of the biggest challenges due to various reasons; first of all, some people, especially in poor areas, might not have the needed information and communications technology tools, such as computers and cell phones, and secondly, delivering and receiving online content needs a reliable internet connection, which in many cases might not exist.

Blended learning refers to an intentional combination of face-to-face and online learning experiences. It is broader than simply uploading lecture notes to the internet. Effective blended learning requires a coherent relationship between physical and digital activities, including instructional objectives, content, learner interaction, assessment, and feedback. Garrison and Vaughan (2007) emphasise redesigning learning experiences so that face-to-face and online environments complement one another.

The study identifies the combination of face-to-face classroom learning and online learning as the dominant blended-learning format reported by respondents. This is consistent with the broad conceptualisation of blended learning used in the study and distinguishes it from fully online learning.

Use of New Media in Education

In the era of globalization, information revolution is a critical factor which is reshaping the education processes. Corgburn and Adeye (1999) note that, the driving force behind the current information revolution is the new technologies that goes with Information and Communications Technology (ICT) (Auwal, 2026). These technologies continue to provide enabling environment for global education process in which geographical regions are benefiting one way or the other from the vast opportunities in the global education industry (Geleijnse, 1994 cited in Echezona et al, 2009:75).

Concerns over educational relevance and quality coexist with the imperative of expanding educational opportunities to those made most vulnerable by globalization. Global changes also put pressure on all groups to constantly acquire and apply new skills. Information and communication technologies (ICTs) – which includes radio and television, as well as, newer digital technologies such as computers and the Internet have been touted as potentially powerful enabling tools for educational change and reform.

When used appropriately, different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life. Education is a very essential aspect of societal and individuals' lives. Education to a society is more important than anything.

Advancement in technologies has eased the processes of academic and professional researches. However, the educational effectiveness of ICTs depends on how they are used and for what purpose. Like any other educational tool or mode of educational delivery, ICTs do not work for everyone, everywhere in the same way. Information revolution, powered by Information and Communication Technology (ICT), has given impetus to a new information economy. Information and knowledge have become very critical factors of production just like land and capital during agrarian and industrial revolution. This revolution is tremendously impacting in all aspect of human life particularly in critical areas like education. Globalization has opened up a wider horizon for coresearchers, not only in Nigeria, but also in other developing countries. Internationalization of resources has permitted researchers and scholars with different culture and locations to show-case what is obtainable in their environment. Scholars in Nigeria can as a result of globalization, today access simultaneously resources in other Universities without traveling to the physical locations. Today learning opportunities have improved markedly in Nigeria since the advent of information technology

and the globalization processes. The ubiquitous learning resources on the web have spurred scholars to take collaborative strides in the pursuit of knowledge. More importantly is its influence in distance learning, in which a learner can register as a student at their base and receive instructions online (Echezona et al., 2009:74-76).

Benefits of Blended Learning

The literature reviewed in the source manuscript identifies flexibility, access to learning resources, improved engagement, accommodation of different learning preferences, and potential cost advantages as important benefits. Online components can allow learners to access materials outside scheduled class periods and can support self-paced learning. Face-to-face interaction, meanwhile, provides opportunities for immediate clarification, social interaction, and direct instructor support. These benefits are not automatic. They depend on reliable infrastructure, appropriate course design, digital competence, student self-regulation, and timely instructor feedback. Thus, the success of blended learning should be considered an institutional and pedagogical issue as well as a technological one.

Challenges of New Media for Blended Learning

Over the years, the transitional advancement in digital technologies and the increasing numbers of new media platforms have revolutionized the ways in which people communicate and share information (Auwal, 2015). According to him, the new information and communication technologies have impacted on the society positively and negatively. These technologies have affected the socio-cultural, political and economic structures of the contemporary society. However, advancement in technologies have eased and expanded the frontiers of communication and information reception and dissemination among people. The Information and Communication Technologies (ICTs), particularly the Internet, have impacted greatly on the society; increasing access to information and creating fresh challenges for the society.

Another challenge is learner self-regulation. Online components can require students to manage time, maintain motivation, and seek clarification when immediate face-to-face support is unavailable. Delayed feedback or poorly designed online materials can also contribute to misunderstanding. Consequently, institutional adoption should include instructional support and digital-literacy development rather than focusing only on hardware and connectivity.

Prospects of New Media for Blended Learning

Despite these challenges, the study participants reported positive prospects for new-media-supported blended learning. The principal prospects identified were flexibility, improved access to resources, greater engagement, and cost-effectiveness. New media can also extend academic interaction beyond the classroom and facilitate rapid circulation of course materials. The prospects are strongest when institutions provide stable connectivity, affordable data access, electricity, appropriate devices, staff training, and curriculum designs that specify how digital and face-to-face activities should work together.

Theoretical Framework

Technology Acceptance Model

This study is anchored in the Technology Acceptance Model (TAM) developed by Davis (1989). TAM proposes that perceived usefulness and perceived ease of use are central determinants of users' acceptance of information technology. Perceived usefulness concerns the extent to which a person believes that using a technology will improve task performance, while perceived ease of use concerns the extent to which the technology is perceived as requiring little effort.

TAM is relevant to this study because students' and lecturers' continued use of new media for blended learning depends partly on whether they consider the platforms useful for teaching and learning and sufficiently

easy to operate. The model also helps interpret the finding that participants generally expressed positive views of new-media use while simultaneously reporting structural barriers. In other words, favourable perceptions of technology may coexist with limited or inconsistent use when connectivity, electricity, data, and device access are inadequate.

The study uses TAM as an interpretive framework rather than as a basis for statistical hypothesis testing. The questionnaire did not report validated TAM scales or inferential tests of the model's constructs; therefore, the findings should not be interpreted as a formal empirical test of TAM.

Empirical Review

Previous studies reviewed positive educational possibilities associated with blended learning and digital tools. Achuonye (2019), for example, reported improved achievement among learners exposed to blended learning compared with a traditional teaching group in the context studied. Research on technology-supported English-language instruction has also reported benefits associated with peer and instructor feedback, ease of revision, and access to learning materials. Nigerian studies cited in the source manuscript further indicate that WhatsApp and other digital tools can support teaching, learning, collaboration, and student engagement.

However, the existing literature does not eliminate the need for institution-specific research. Differences in location, infrastructure, institutional policy, student population, staff digital competence, and available platforms can substantially affect implementation. The present study therefore extends the literature by documenting the situation at Federal Polytechnic Ugep.

Methodology

Research Design

The study employed a mixed-methods design using a questionnaire and in-depth interviews. Quantitative data were collected to describe patterns

of new-media use and respondents' perceptions, while qualitative interviews were used to provide contextual explanations of use, challenges, and prospects. The two forms of evidence were considered together during interpretation.

Area of Study

The study was conducted at Federal Polytechnic Ugep, Cross River State, Nigeria, formerly known as Cross River Institute of Technology and Management (CR-ITM), according to the source manuscript. The institution has two campuses in Ugep, Yakurr Local Government Area. The source manuscript reports that the institution has students from different departments, academic staff, and non-academic staff and that internet access and information and communication technology facilities were available for teaching and learning.

Population of the Study

The reported institutional population was 653, comprising 315 students, 178 academic staff, and 160 non-academic staff. Because the research questions concern students' and academic staff's use of new media for blended learning, the role of the non-academic staff population in the sampling frame should be clarified in any final journal submission.

Population category	Number
Students	315
Academic staff	178
Non-academic staff	160
Total	653

Source: Study field data as reported in the original manuscript.

Sample Size and Sampling

The sample size of this study is 248, the study adopts the demographic table's distribution of 183 students and 65 lecturers because this number can be study. 248 as the questionnaire sample and 50 as the qualitative interview sample. The 50 interviewees are treated as a separate qualitative sample. The multistage sampling technique was employed.

Instruments and Data Collection

The instruments were a structured questionnaire and an interview guide. The questionnaire used a Likert-type response format and included items on demographic characteristics, access to internet-enabled devices, use of new media, blended-learning formats, challenges, and perceived prospects. The researcher conducted face-to-face interviews, with each session reported to have lasted approximately 30 minutes.

Data Analysis

Questionnaire responses were analysed using frequencies and percentages and presented in tables. Interview data were analysed thematically. Because the reported analysis is descriptive.

Results

Questionnaire Response Rate

Description	Frequency	Percentage
Questionnaires administered	248	100.0%
Valid questionnaires returned	248	100.0%
Unreturned questionnaires	0	0.0%

Field survey 2026

Demographic Characteristics

Characteristic	Category	n	%
Sex	Male	114	46.0
	Female	134	54.0
Age	18–25 years	72	29.0
	26–32 years	43	17.3
	33–40 years	121	48.8
	40 years and above	12	4.8
Marital status	Married	96	38.7
	Single	152	61.3
Respondent category	Students	183	73.8
	Lecturers	65	26.2

Field survey 2026

The questionnaire respondents were predominantly female (54.0%) and students (73.8%). Most respondents were aged between 18 and 40 years. The demographic profile is descriptive and was not used to infer differences between groups because no inferential analysis was reported.

Use of New Media for Academic Purposes

Primary reported use	n	%
Receiving lectures	157	63.3
Getting new ideas to improve academic work	18	7.3
Sending and receiving lecture notes	23	9.3
Reading online materials	15	6.1
Socialising with friends and family	22	8.9
Sharing academic experiences with students in other states	7	2.8
Social networking/making new friends online	6	2.4
Total	248	100.0

Field survey 2026

Receiving lectures was the most frequently reported academic use of new media (63.3%), followed by sending and receiving lecture notes (9.3%). The results suggest that respondents used digital platforms for both formal academic communication and non-academic social interaction.

Platforms Used

Platform/category	N	%
YouTube	72	29.0
Screencast-O-Matic	32	12.9
TED-Ed	12	4.8
Google Docs	17	6.9
Khan Academy	4	1.6
WhatsApp	82	33.1
Most of the above	29*	11.7
None of the above	0	0.0
Total	248	100.0

Field survey 2026

Editorial arithmetic correction: the original manuscript reports 20 respondents for 'Most of the above' but gives 11.7%, which corresponds to approximately 29 of 248 respondents. The revised table uses 29 to make the reported percentage and total internally consistent. This should be checked against the original dataset before submission.

WhatsApp was the most frequently reported single platform (33.1%), followed by YouTube (29.0%). The result suggests a strong role for mobile messaging and video-based platforms in the institution's blended-learning environment.

Knowledge and Access

Item	Response	n	%
Know that blended learning combines face-to-face and online learning	Yes	202	81.5
	No	46	18.5
Have an internet-enabled device	Yes	248	100.0
	No	0	0.0
Have internet access	Yes	248	100.0
	No	0	0.0

Field survey 2026

Most respondents (81.5%) correctly identified blended learning as a combination of face-to-face and online learning. All respondents reported having an internet-enabled device and internet access. These findings indicate high reported access among the surveyed participants, but they should not be generalised to the entire Nigerian tertiary-education population.

Format of Blended Learning

Format	n	%
Combination of face-to-face classroom and online learning	202	81.5
Face-to-face classroom learning	40	16.1
Online learning	6	2.4
Total	248	100.0

Field survey 2026

The dominant reported format was the combination of face-to-face and online learning (81.5%). A smaller proportion reported predominantly face-to-face learning (16.1%), while 2.4% reported online learning. The findings therefore support the conclusion that blended learning, rather than fully online learning, was the predominant format reported by respondents.

Frequency of Access to Internet-Enabled Computer Devices

Frequency	n	%
Regularly	202	81.5
Occasionally	46	18.5
Rarely	0	0.0
Not at all	0	0.0
Total	248	100.0

Field survey 2026

Most respondents (81.5%) reported regular access to an internet-enabled computer device, while 18.5% reported occasional access. No respondent selected 'rarely' or 'not at all'.

Challenges of New-Media-Supported Blended Learning

The original challenge table contains a numerical inconsistency in its first item: the reported frequencies sum to 232 rather than 248, and the reported percentages sum to 93.5%. Because the missing response cannot be reconstructed reliably from the source manuscript, the item is not recalculated or presented as a complete distribution below. The remaining reported items are retained as originally supplied.

Reported challenge	Very likely	Likely	Moderate	Less likely	Not at all
Most students/lecturers are not aware of blended learning	3 (1.2%)	10 (4.0%)	5 (2.0%)	16 (6.5%)	198 (79.8%)
Poor internet network services in Ugep	34 (13.7%)	56 (22.6%)	12 (4.8%)	23 (9.3%)	123 (49.6%)
Limited knowledge of new-media platforms for blended learning	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	248 (100.0%)
Lack of digital devices	3 (1.3%)	7 (2.8%)	19 (7.7%)	45 (18.1%)	174 (70.2%)
Lack of internet data/Wi-Fi connectivity	41 (16.5%)	32 (12.5%)	3 (1.2%)	16 (6.5%)	156 (62.9%)

Field survey 2026

The qualitative interviews provide stronger contextual evidence on the challenges than the inconsistent quantitative item. Interview participants repeatedly identified poor network connectivity, data availability, irregular electricity supply, and lack of suitable devices as barriers to effective use.

Prospects of New Media

Prospect	N	%
Flexibility	26	10.5
Access to resources	24	9.7
Improved engagement	10	4.0
Cost-effectiveness	16	6.5
All of the above	172	69.4
Total	248	100.0

Field survey 2026

Most respondents (69.4%) selected all listed prospects—flexibility, access to resources, improved engagement, and cost-effectiveness. This indicates broadly positive perceptions of the potential value of new media for blended learning.

Qualitative Findings

The interviews involved 50 academic staff selected through the snowball approach. The respondents were grouped into five groups of 10 for reporting purposes. Four broad patterns emerged. First, most interview participants reported using new media for teaching and blended learning. The original analysis states that approximately 80% of the interviewees used new media for blended learning, while approximately 20% used new media but preferred face-to-face instruction. The latter group cited conventional classroom interaction and note-taking practices as reasons for their preference.

Second, participants identified poor network connectivity as a recurring constraint. Third, they identified limited access to suitable devices, data costs, and irregular electricity supply as additional barriers. Fourth, most participants viewed new media as beneficial for work and teaching, although one reported group considered new media distracting and preferred face-to-face teaching.

Taken together, the qualitative evidence indicates that acceptance of new media is generally favourable but conditioned by infrastructure, resources, and pedagogical preferences.

Discussion

Use and Format of Blended Learning

The findings show that new media is already part of the academic communication environment at Federal Polytechnic Ugep. Receiving lectures was the dominant reported use, while WhatsApp and YouTube were the most prominent individual platforms. Most respondents also identified

blended learning as a combination of face-to-face and online learning, and 81.5% reported this as the principal format in use. These results are consistent with the broader literature that conceptualises blended learning as an integration of physical and online learning rather than a wholesale substitution of one mode for another (Garrison & Vaughan, 2007; Lalima & Dangwal, 2017). The findings also align with TAM insofar as users appear to recognise practical value in digital tools. However, the study did not measure perceived usefulness or ease of use with validated TAM scales; therefore, the theoretical interpretation should remain cautious.

An important implication is that institutional use should move beyond informal communication. Where messaging applications are used mainly to send notes or announcements, the institution may be engaging in digital supplementation rather than a fully developed blended-learning model. More deliberate course design, online assessment, structured discussion, multimedia resources, and feedback mechanisms would deepen the pedagogical integration of new media.

Challenges

The recurring constraints identified by the interview participants — poor connectivity, data limitations, irregular electricity, and device access—demonstrate that technological adoption is embedded in material conditions. A positive attitude toward digital learning cannot compensate for unreliable infrastructure. This finding is particularly important for institutions outside major urban centres, where connectivity and power reliability may be more difficult to sustain.

The results also show that infrastructure and pedagogy are interconnected. Even when a lecturer owns a smartphone and understands a platform, sustained blended learning may be difficult if students cannot afford data, devices are unavailable, or electricity interruptions prevent charging and connectivity. Institutional interventions should therefore be designed as a

system rather than as isolated technology purchases.

Prospects

Respondents' positive assessment of flexibility, access to resources, engagement, and cost-effectiveness suggests a favourable institutional climate for further development of blended learning. The findings support the argument that new media can extend learning beyond fixed classroom periods and enable access to resources that would otherwise be limited by time and location.

Nevertheless, perceived prospects should not be equated with demonstrated improvements in academic achievement. The present study did not use examination scores, experimental controls, longitudinal tracking, or other objective measures of learning outcomes. Its evidence therefore supports a conclusion about perceived educational value and reported use, not causal effectiveness.

Summary of Findings

1. New media is used by students and academic staff at Federal Polytechnic Ugep for academic communication and learning activities.
2. Receiving lectures was the most frequently reported use of new media, and WhatsApp was the most frequently reported single platform.
3. Most respondents identified blended learning as a combination of face-to-face and online learning, and this was the dominant format reported in the institution.
4. The major challenges identified qualitatively were poor network connectivity, data constraints, irregular electricity supply, and limited access to appropriate digital devices.
5. Respondents perceived flexibility, access to learning resources, improved engagement, and cost-effectiveness as important prospects of new-media-supported blended learning.

6. The evidence supports positive perceptions and substantial use, but it does not establish a causal effect of new media on students' academic performance.

Conclusion

New media has become a meaningful component of blended-learning practice at Federal Polytechnic Ugep. The study shows substantial reported use of digital platforms for lectures, learning materials, and academic interaction and indicates that the dominant learning format combines face-to-face and online activities. At the same time, the sustainability and quality of this practice are constrained by connectivity, data, electricity, and device-related barriers.

The central implication is that digital transformation in tertiary education should not be understood simply as the provision of applications or internet access. Effective blended learning requires coordinated investment in infrastructure, staff competence, student support, curriculum design, instructional design, and institutional policy. When these components are aligned, new media can complement rather than displace the strengths of face-to-face teaching.

Recommendations

1. Institutional and regulatory authorities should support curriculum and instructional-design frameworks that explicitly integrate digital activities with face-to-face teaching.
2. Federal Polytechnic Ugep should strengthen campus internet infrastructure and explore sustainable arrangements for affordable data access for students and academic staff.
3. The institution should improve the reliability of electricity and provide charging and connectivity support for digital learning where feasible.
4. Regular professional-development programmes should be organised to strengthen lecturers' digital competence, online assessment skills,

- multimedia-content development, and blended-course design.
5. Students should receive structured orientation on digital-learning skills, online communication, time management, information evaluation, and responsible use of educational platforms.
 6. Future institutional evaluations should use validated measures of technology acceptance and objective indicators of learning outcomes so that the relationship between new-media use and academic performance can be tested more rigorously.

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